

What is claimed is:

1. An implant for insertion between a first vertebra and a second vertebra, the first vertebra having a first cortical bone endplate and the second vertebra having a second cortical bone endplate, wherein the implant comprises:

5 a first terminal part defining a first bearing surface substantially planar and adapted to bear against the first cortical bone endplate and an opposite second bearing surface substantially planar and adapted to bear against the second cortical bone endplate;

a second terminal part opposite said first terminal part, said second terminal part defining a third bearing surface adapted to bear against the first cortical bone endplate and a

10 fourth bearing surface adapted to bear against the second cortical bone endplate; and

an elongated body including a central portion extending from said first terminal part to said second terminal part, said body defining a longitudinal axis and having an upper bearing surface and a lower bearing surface, wherein the upper bearing surface and the second lower bearing surface are arcuate along the longitudinal axis.

15 2. The implant of claim 1 wherein the body defines a cavity for receiving bone osteogenic material.

3. The implant of claim 1 wherein the first bearing surface and the second bearing  
20 surface include an anti-expulsion feature.

4. The implant of claim 3 wherein the anti-expulsion feature includes ridges transverse to the longitudinal axis.

5. The implant of claim 1 wherein the third bearing surface and the fourth bearing surface include an anti-expulsion feature.

6. The implant of claim 1 wherein the third and fourth bearing surface are curved.

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7. The implant of claim 2 wherein the upper bearing surface and the lower bearing surface each include at least one opening into the cavity and a continuous perimeter surface.

8. The implant of claim 1 wherein the upper bearing surface and the lower bearing surface are adapted to engage a cancellous bone portion of the first and second vertebrae.

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9. The implant of claim 1 wherein the upper bearing surface is configured to mate with the first cortical bone endplate and the lower bearing surface is configured to mate with the second cortical bone endplate.

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10. The implant of claim 1 wherein first bearing surface and the second bearing surface are separated by a first distance, and the third bearing surface and the fourth bearing surface are separated by a second distance greater than the first distance.

11. An implant for insertion between a first vertebra and a second vertebra, the first vertebra having a generally vertically extending first peripheral wall and a first cortical bone endplate and the second vertebra having a having a generally vertically extending second peripheral wall and a second cortical bone endplate, wherein the implant comprises:

5 a first terminal part defining a first bearing surface adapted to bear against a portion of the cortical bone endplate proximate to the first peripheral wall and an opposite second bearing surface adapted to bear against a portion of the second cortical bone endplate proximate to the second peripheral wall,

an elongated body including a central part extending from said first terminal part,  
10 said central part defining a longitudinal axis and having an upper bearing surface and a lower bearing surface wherein the upper bearing surface and the lower bearing surface are arcuate along the longitudinal axis,

a second terminal part opposite said first terminal part and having an insertion face extending from the first upper bearing surface to the second lower bearing surface wherein  
15 said insertion face is provided to ease insertion of the implant between the first vertebra and second vertebra.

12. The implant of claim 11 wherein the body defines a cavity for receiving bone osteogenic material.

20 13. The implant of claim 11 wherein the first bearing surface and the second bearing surface include at least one anti-expulsion feature.

14. The implant of claim 13 wherein the anti-expulsion feature includes a ridge transverse to the longitudinal axis.

15. The implant of claim 11 wherein the first bearing surface and the second bearing surface are substantially planar.

16. The implant of claim 11 wherein the second terminal part includes a third bearing surface provided to bear against a portion of the cortical bone endplate proximate to the first peripheral wall and an opposite fourth bearing surface adapted to bear against a portion of the second cortical bone endplate proximate to the second peripheral wall.

17. The implant of claim 16 wherein the third bearing surface and the fourth bearing surface include anti-expulsion features.

18. The implant of claim 16 wherein the third and fourth bearing surface are curved.

19. The implant of claim 11 wherein the upper bearing surface and the lower bearing surface include openings into the cavity.

20. The implant of claim 11 wherein the upper bearing surface and the lower bearing surface are adapted to engage cancellous bone of the first and second vertebrae.

21. The implant of claim 1 wherein the upper bearing surface is configured to mate with the first cortical bone endplate and the lower bearing surface is configured to mate with the second cortical bone endplate.

5 22. A tool for insertion between a first vertebra with a cortical bone endplate and a second vertebra with a second cortical bone endplate, wherein the tool comprises:

a proximal handle connected to an elongated shaft configured to rotate about a longitudinal axis of the tool;

an outer sleeve adjacent to the handle and the shaft extending through the conduit  
10 and configured to rotate relative thereto;

a cutting portion fixed to the shaft to rotate therewith, the cutting portion including a pair of generally parallel opposing surfaces, each surface having a first arcuate cutting edge and an opposite second arcuate cutting edge; and

a non-cutting portion fixed to the cutting portion and distal to the handle, wherein the  
15 non-cutting portion is configured to align said cutting portion between the cortical bone endplate of the first vertebra and the cortical bone endplate of the second vertebra.

23. The tool of claim 22 wherein the outer sleeve includes at least one stop to bear against the first or second vertebrae to limit the depth of insertion of the tool between the first  
20 and second vertebrae.

24. The tool of claim 22 wherein the first and second surfaces of the cutting portion define a cavity therebetween.

25. The tool of claim 22 wherein the first and second vertebrae have an anterior portion and a posterior portion and the first and second arcuate cutting edges are adapted to preserve cortical bone on the anterior and posterior portion of the first and second vertebrae.

5 26. The tool of claim 22 wherein the cutting portion and the non-cutting portion are adapted to position the first and second cutting edges on the first and second surfaces to remove substantially equal amounts of bone from the first and second vertebrae.

27. A method of treating a patient having a spinal deformative, wherein said patient  
10 includes a first vertebra and a second vertebra, the first vertebra having a generally vertically extending first peripheral wall and a first cortical bone endplate and the second vertebra having a having a generally vertically extending second peripheral wall and a second cortical bone endplate, said method comprising:

selecting a spinal implant having an elongated body extending from said first terminal  
15 part and said second terminal part, said body defining a longitudinal axis and having an upper surface and a lower surface wherein the first upper surface and the second lower surface are arcuate along the longitudinal axis and wherein said implant includes a first bearing surface adapted to bear against a portion of the first cortical bone endplate proximate to the first peripheral wall and an opposite second bearing surface adapted to bear against the second  
20 cortical bone endplate proximate to the second peripheral wall; and

surgically implanting the implant between the first vertebra and the second vertebra.

28. The method of claim 27 comprising removing a portion of the first cortical bone endplate and a portion of the second cortical bone endplate with a tool having cutting portion

including a pair of generally parallel opposing surfaces, each surface having a first arcuate cutting edge corresponding to the upper surface of the implant and an opposite second arcuate cutting edge corresponding to the lower surface of the implant.